



Quick Decontamination Solutions (QDS) Combo Wipes



An easy and efficient method to decontaminate radioactive surface contamination

How the Combo Wipes Work

The core technology used in the QDS Combo Wipes is based upon the "Mass Effect" Principle. When the proprietary wipes, which are saturated with the decontamination solution, come in direct contact with 'loose' or 'removable' contamination on a surface, the radioactive material is 'lifted' from the material surface via the ion-exchange process. Like-property non-radioactive ions replace the radioactive ones. The radioactive ions/contamination is collected on the wipe and disposed of as radioactive waste.

FEATURES

- ◆ 80-90% Decontamination Factor
- ◆ 35 wipes per canister
- ◆ Effective on **BOTH** Transition Metals and Actinides Radionuclide Isotope Families
- ◆ 10+ year Shelf Life of product (dry); 60+ days when distilled water is added

Advantages

- Safe surface radiation isotope remover
- Safe & quick ionic-focused for radiation removal
- First line for safe radiation defense
- Environmentally friendly
- Cost effective
- Effective on 63 different radio-isotopes
- Far superior to Radiacwash or any other similar products

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BENEFITS



**SIGNIFICANT
REDUCTION IN
CRITICAL PATH
TIME & DOSE**



**NON-TOXIC,
ENVIRONMENTALLY
FRIENDLY & SAFE
ON HUMAN SKIN**



**SIMPLE & COST
EFFECTIVE
ALARA SOLUTION**

Use Cases

- ⇒ Decon Facility Use; Reduce contamination levels on tools
- ⇒ RCA Boundary/Control Point Decontamination; 'free-release' of personal items, clothing, and tools following alarm monitoring
- ⇒ Spot Wall and Floor Decontamination
- ⇒ Environmental/Emergency Planning (EP) Response teams ---post accident
- ⇒ 1st Responders and Facility Spill Clean-up kits

Directions for Use: Open canister and add 500ml DI water. Replace lid and shake vigorously for 1 min. Let stand for up to 30 min., then invert for a few minutes to let solution permeate wipes completely. Wipes should be yellow in color. If solution contacts skin, wash with soap and water. Wearing protective elastic gloves, remove one wipe at a time from canister by tearing off at score line. Apply wetted wipe to surfaces to be decontaminated and rub area vigorously. Remove excess solution, wipes, and contaminated gloves and dispose of as radioactive waste. Repeat process as needed.

Generally not hazardous in normal handling; however, good laboratory practices should always be used. Avoid long term exposure to skin or by inhalation.

Periodic Table of the Elements

1 1IA 1A	2 IIA 2A											13 IIIA 3A	14 IVA 4A	15 VA 5A	16 VIA 6A	17 VIIA 7A	18 VIIIA 8A																		
1 H Hydrogen 1.0079	2 He Helium 4.00260											3 Li Lithium 6.941	4 Be Beryllium 9.01218	5 B Boron 10.811	6 C Carbon 12.011	7 N Nitrogen 14.00674	8 O Oxygen 15.9994	9 F Fluorine 18.998403	10 Ne Neon 20.1797																
11 Na Sodium 22.989768	12 Mg Magnesium 24.305	3 Al Aluminum 26.981538	4 Si Silicon 28.0855	5 P Phosphorus 30.973762	6 S Sulfur 32.06	7 Cl Chlorine 35.4527	8 Ar Argon 39.948	19 K Potassium 39.0983	20 Ca Calcium 40.078	21 Sc Scandium 44.95591	22 Ti Titanium 47.88	23 V Vanadium 50.9415	24 Cr Chromium 51.9961	25 Mn Manganese 54.938	26 Fe Iron 55.847	27 Co Cobalt 58.9332	28 Ni Nickel 58.6934	29 Cu Copper 63.546	30 Zn Zinc 65.39	31 Ga Gallium 69.723	32 Ge Germanium 72.64	33 As Arsenic 74.92159	34 Se Selenium 78.96	35 Br Bromine 79.904	36 Kr Krypton 83.80										
37 Rb Rubidium 85.4678	38 Sr Strontium 87.62	39 Y Yttrium 88.90585	40 Zr Zirconium 91.224	41 Nb Niobium 92.90638	42 Mo Molybdenum 95.94	43 Tc Technetium 98.9072	44 Ru Ruthenium 101.07	45 Rh Rhodium 102.9055	46 Pd Palladium 106.42	47 Ag Silver 107.8682	48 Cd Cadmium 112.411	49 In Indium 114.818	50 Sn Tin 118.71	51 Sb Antimony 121.760	52 Te Tellurium 127.6	53 I Iodine 126.90447	54 Xe Xenon 131.29	55 Cs Cesium 132.90543	56 Ba Barium 137.327	57-71 Lanthanide Series	72 Hf Hafnium 178.49	73 Ta Tantalum 180.9479	74 W Tungsten 183.85	75 Re Rhenium 186.207	76 Os Osmium 190.23	77 Ir Iridium 192.22	78 Pt Platinum 195.08	79 Au Gold 196.9665	80 Hg Mercury 200.59	81 Tl Thallium 204.3833	82 Pb Lead 207.2	83 Bi Bismuth 208.98037	84 Po Polonium [208.9824]	85 At Astatine 209.9871	86 Rn Radon 222.0176
87 Fr Francium 223.0197	88 Ra Radium 226.0254	89-103 Actinide Series	104 Rf Rutherfordium [261]	105 Db Dubnium [262]	106 Sg Seaborgium [266]	107 Bh Bohrium [264]	108 Hs Hassium [269]	109 Mt Meitnerium [268]	110 Ds Darmstadtium [269]	111 Rg Roentgenium [272]	112 Cn Copernicium [277]	113 Uut Ununtrium unknown	114 Fl Flerovium [289]	115 Uup Ununpentium unknown	116 Lv Livermorium [293]	117 Uus Ununseptium unknown	118 Uuo Ununoctium unknown	119 Ts Tennessine [289]	120 Og Oganesson [294]	121 Nh Nihonium [285]	122 Fl Flerovium [289]	123 Mc Moscovium [288]	124 Lv Livermorium [293]	125 Ts Tennessine [289]	126 Og Oganesson [294]	127 Nh Nihonium [285]	128 Fl Flerovium [289]	129 Mc Moscovium [288]	130 Lv Livermorium [293]	131 Ts Tennessine [289]	132 Og Oganesson [294]				
		Alkali Metal	Alkaline Earth	Transition Metal	Basic Metal	Semimetal	Nonmetal	Halogen	Noble Gas	Lanthanide	Actinide																								

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